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The Commissioner of Patents and Trademarks

Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this

United States Patent

Grants to the person(s) having title to this patent the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States of America or importing the invention into the United States of America for the term set forth below, subject to the payment of maintenance fees as provided by law.

If this application was filed prior to June 8, 1995, the term of this patent is the longer of seventeen years from the date of grant of this patent or twenty years from the earliest effective U.S. filing date of the application, subject to any statutory extension.

If this application was filed on or after June 8, 1995, the term of this patent is twenty years from the earliest effective U.S. filing date of the application, subject to any statutory extension.

Bruce Lehman

Commissioner of Patents and Trademarks

Melvinia Gary
Attest



US005577767A

United States Patent [19]

Nemoto

[11] Patent Number: 5,577,767

[45] Date of Patent: Nov. 26, 1996

[54] HOUSING ASSEMBLY FOR AN AIR BAG
AND VEHICLE HORN SWITCH

[75] Inventor: Hiroshi Nemoto, Mesa, Ariz.

[73] Assignee: TRW Inc., Lyndhurst, Ohio

[21] Appl. No.: 400,260

[22] Filed: Mar. 8, 1995

[51] Int. Cl.⁶ B60R 21/16

[52] U.S. Cl. 280/731; 200/61.54

[58] Field of Search 280/728.1, 728.3,
280/731; 200/61.54-61.57

References Cited

U.S. PATENT DOCUMENTS

4,903,986	2/1990	Cok et al.	280/731
4,934,735	6/1990	Embach	280/731
5,002,306	3/1991	Hiramitsu et al.	280/731
5,085,461	2/1992	Shibata	280/731
5,085,462	2/1992	Gualtier	280/731
5,198,629	3/1993	Hayashi et al.	280/731
5,265,905	11/1993	Shelton	280/731
5,465,998	11/1995	Davis	280/731

FOREIGN PATENT DOCUMENTS

5-16756 1/1993 Japan 280/731

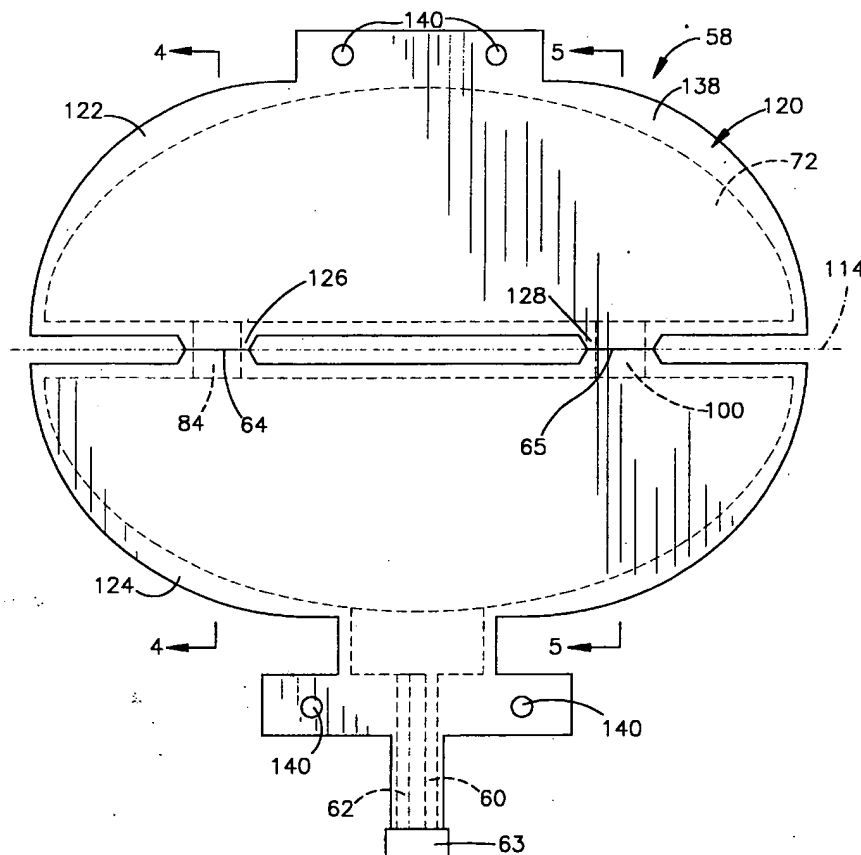
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mino & Szabo

[57] ABSTRACT

An apparatus for enclosing an air bag (38) on a steering wheel (22) includes an inner cover (34) at least partially enclosing the air bag (38) and having a tear seam central portion (50) along which the inner cover ruptures upon inflation of the air bag (38). An outer cover (36) at least partially encloses the inner cover (34) and the air bag (38) and includes a tear seam central portion (49) with a length substantially equal to the length of the tear seam central portion (50) in the inner cover (34). A horn switch (58) is disposed between the inner and outer covers (34 and 36) for effecting operation of a horn. The horn switch (58) includes first and second tear seams (64, 65) aligned with the tear seam central portions (50 and 49) in the inner and outer covers (34 and 36). The first and second tear seams (64, 65) in the horn switch (58) have a combined length substantially less than the length of each of the tear seams (49 and 50).

10 Claims, 4 Drawing Sheets



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